

REMARKS

Applicant submits this Amendment together with a Request for Continued Examination in response to the Final Office Action mailed December 21, 2010. Prior to this response, claims 26, 28-45, and 50 were pending.

In the Final Office Action mailed December 21, 2010, the Examiner rejected all pending claims. Claims 26, 28, 31-33, 40, and 46-50 were rejected as allegedly being unpatentable under 35 U.S.C. § 103(a) over U.S. Patent No. 6,688,127 ("*Laubacher*") in view of U.S. Patent No. 6,622,028 ("*Abdelmonem-028*").¹ The Examiner also rejected dependent claims 29, 30, 34-39, and 41-45 under 35 U.S.C. § 103(a) as being unpatentable over *Laubacher* in view of *Abdelmonem-028* and further in view of one of U.S. Patent Application Publication No. 2002/0151331 ("*Abdelmonem-331*"), U.S. Patent Application Publication No. 2003/0227350 ("*Abdelmonem-350*"), U.S. Patent Application Publication No. 2005/0164888 ("*Hey-Shipton*"), U.S. Patent No. 6,263,215 ("*Patton*"), and U.S. Patent No. 6,011,524 ("*Jervis*").

In this response, Applicant has amended claims 26 and 50. Consequently, claims 26, 28-45, and 50 are currently pending, of which claims 26 and 50 are independent. Applicant respectfully traverses the pending rejections.

Rejection of Claims 26, 28, 31-33, 40, and 46-50 Under 35 U.S.C. § 103(a)

Claims 26, 28, 31-33, 40, and 46-50 stand rejected under 35 U.S.C. § 103(a) as allegedly being obvious over *Laubacher* in view of *Abdelmonem-028*. Claims 26 and 50

¹ Although the rejection over *Laubacher* in view of *Abdelmonem-028* includes claims 46-49, those claims were canceled in the Reply to Office Action filed October 27, 2010. Applicant presumes that the Examiner intended to apply this rejection only to claims 26, 28, 31-33, 40, and 50.

are the only independent claims included in this rejection. Although Applicant disagrees with the merits of the rejection, Applicant has amended claims 26 and 50 to advance prosecution. Applicant respectfully traverses the obviousness rejection because *Laubacher* and *Abdelmonem-028* fail to disclose or suggest all of the subject matter recited in those independent claims.

Amended independent claim 26 is patentably distinguishable from the cited references in that it recites a receiver front-end for use in a transceiver station of a wireless communication network, said transceiver station being associated with an antenna assembly comprising a primary and at least a secondary antenna, said receiver front-end being adapted for insertion between said antenna assembly and signal processing sections of said transceiver station. The receiver front-end further comprises:

a primary and at least a secondary receiving branch, said primary receiving branch being adapted for coupling to said primary antenna and to said signal processing sections of said transceiver station and for communicating radio signals received by said primary antenna to said signal processing sections, and said secondary receiving branch being adapted for coupling to said secondary antenna and to said signal processing sections and for communicating radio signals received by said secondary antenna to said signal processing sections simultaneous with and independent from said primary receiving branch, said secondary receiving branch comprising at least one superconducting component, wherein said primary receiving branch consists of non-superconducting components including at least one non-superconducting filter.

(Emphasis added). Amended independent claim 50, while different in scope, recites similar subject matter. The applied references fail to disclose or render obvious at least these features.

Laubacher discloses cryogenic devices based on superconducting elements, low thermal transmission interconnects, and low dissipated power semiconductors. According to the Final Office Action, *Laubacher* fails to disclose non-superconducting components (Final Office Action at 3), but the Final Office Action cites to *Abdelmonem-028* to allegedly fill that void.

The Final Office Action cites *Abdelmonem-028* for teaching “wherein said primary receiving branch [path of input of 60 to output of 258] consists of non-superconducting components including at least one non-superconducting filter, normal filter 60.” *Id.* In the Advisory Action mailed July 14, 2011, the Examiner maintained this position, stating “the receiver front-end 50 in Fig. 2 being structured with selectable normal filter 60 & high temperature HTS filter 58, col. 4, line 62 to col. 5, line 17; the HTS filter is a superconducting filter, col. 1, lines 27 -39; the normal filter 60 can be any non-HTS filter, which is nonsuperconducting filter, or any filter having five or more poles, col. 6, lines 42-67, for the claimed primary receiving branch consists of non-superconducting components in normal filter 60.” Advisory Action at 3.

Although Applicant disagrees with that assessment, claims 26 and 50 have been amended to advance prosecution. Neither *Laubacher* nor *Abdelmonem-028* anticipates or renders obvious the subject matter recited in the amended independent claims at least because they fail to disclose or suggest “a primary and at least a secondary

receiving branch, said primary receiving branch being adapted for coupling to said primary antenna and to said signal processing sections of said transceiver station and for communicating radio signals received by said primary antenna to said signal processing sections, and said secondary receiving branch being adapted for coupling to said secondary antenna and to said signal processing sections and for communicating radio signals received by said secondary antenna to said signal processing sections simultaneous with and independent from said primary receiving branch,” together with the combination of superconducting and non-superconducting components as claimed.

In contrast, *Abdelmonem-028*, the reference allegedly disclosing the claimed branches, discloses an arrangement for bypassing a failed component within a single transmission branch. In the system of *Abdelmonem-028*, a cryostat with a special bypass path switches between superconducting components in a cold region and a conventional non-superconducting filter in a warm area. See *Abdelmonem-028* at Abstract. According to *Abdelmonem-028*, by switching between the cryogenic path and the conventional filter in the warm area, the special bypass can ensure that the receiver front-end remains in operation in case of a failure. *Id.* at 5:19-22.

As such, *Abdelmonem-028* does not disclose a “primary receiving branch being adapted ... for communicating radio signals received by said primary antenna to said signal processing sections” and a “secondary receiving branch being adapted ... for communicating radio signals received by said secondary antenna to said signal processing sections simultaneous with and independent from said primary receiving branch,” said secondary receiving branch comprising at least one superconducting

component, wherein said primary receiving branch consists of non-superconducting components including at least one non-superconducting filter.” Indeed, *Abdelmonem-028*’s bypass structure exists to provide an alternative path in case components in the main path fail, which is the opposite of communicating radio signals “simultaneous with and independent from said primary receiving branch” as presently claimed. See *Abdelmonem-028* at 2:21-25 (“If the cooling system 18 is not functioning or otherwise not performing adequately, the bypass switch 14 provides the incoming RF signal to a conventional (i.e., non-HTS) filter 30 designed to remove signal components outside the same passband as that of the HTS filter 24.”).

Accordingly, the Final Office Action fails to establish that claims 26 and 50, as amended, are *prima facie* obvious based on *Laubacher* and *Abdelmonem-028*. Further, claims 28, 31-33, and 40 (claims 46-49 having previously been canceled) depend, either directly or indirectly, from independent claim 26 and should be allowable for at least the same reasons discussed above that claim 26 is allowable. Therefore, Applicant respectfully requests reconsideration and withdrawal of the Section 103(a) rejection of claims 26, 28, 31-33, 40, and 50 based on *Laubacher* in view of *Abdelmonem-028*.

Rejections of Claims 29, 30, 34-39, and 41-45 Under 35 U.S.C. § 103(a)

In the Final Office Action, dependent claims 29, 30, 34-39, and 41-45 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Laubacher* in view of *Abdelmonem-028* as applied to independent claim 26 and further in view of one or more of *Abdelmonem-331*, *Abdelmonem-350*, *Hey-Shipton*, *Patton*, and *Jervis*. Claims 29,

30, 34-39, and 41-45 depend, either directly or indirectly from amended independent claim 26, which is allowable over *Laubacher* in view of *Abdelmonem-028* for at least the reasons outlined above. *Abdelmonem-331*, *Abdelmonem-350*, *Hey-Shipton*, *Patton*, and *Jervis*, regardless of whether they are viewed individually or as a whole, do not remedy the deficiencies of *Laubacher* in view of *Abdelmonem-028* outlined above, nor does the Examiner so contend. They do not appear to disclose or render obvious, at least, a receiver front-end for use in a transceiver station of a wireless communication network, a “secondary receiving branch being adapted ... for communicating radio signals received by said secondary antenna to said signal processing sections simultaneous with and independent from said primary receiving branch, said secondary receiving branch comprising at least one superconducting component, wherein said primary receiving branch consists of non-superconducting components including at least one non-superconducting filter,” as recited in Applicant’s amended independent claim 26. Therefore, the 35 U.S.C. § 103(a) rejections of dependent claims 29, 30, 34-39, and 41-45 cannot be maintained and should be withdrawn.

Conclusion

In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any additional extensions of time required to enter this response and charge any additional required fees to Deposit Account 06-0916.

Respectfully submitted,

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Dated: September 14, 2011

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